

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 46

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAYUKI INOUE, SHIGEYUKI ITOH,
YUTAKA TAKAMI, and KENJI MATSUMOTO

Appeal No. 2003-0946
Application No. 08/904,137

HEARD: November 20, 2003

Before JERRY SMITH, FLEMING, and BLANKENSHIP, Administrative Patent Judges.
BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 20-38, 51-58, 71-87, 93, and 94, which are all the claims remaining in the application.

We reverse.

BACKGROUND

The invention is directed to an integrated circuit (IC) card, and methods for enhancing security in the addition, or changing, of programs on the card.

Representative claim 75 is reproduced below.¹

75. A writing method for an IC card having a microprocessor, a ROM device which stores a first program which is executed by said microprocessor, a write control program having a decryption function, and a writable memory, said writing method comprising:

inputting an encrypted second program, which has been encrypted based on an encryption key, from an external device;

decrypting said encrypted second program according to said write control program; and

storing a decrypted second program in said writable memory according to said write control program, said decrypted second program being executable by said microprocessor.

The examiner relies on the following reference:

Hirokawa et al. (Hirokawa)	4,827,512	May 2, 1989
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Claims 20-38, 51-58, 71-87, 93, and 94 stand rejected under 35 U.S.C. § 102 as being anticipated by Hirokawa.

We refer to the Examiner's Answer (Paper No. 40) for a statement of the examiner's position and to the Brief (Paper No. 39) and the Reply Brief (Paper No. 42) for appellants' position with respect to the claims which stand rejected.

¹ We note that the amendment filed August 19, 2002 (Paper No. 38) has not been formally entered in the file wrapper.

OPINION

Appellants argue that, contrary to the rejection of all the claims as being anticipated by Hirokawa, the reference fails to disclose decrypting a program to be stored on the IC card. According to appellants, the decryption with respect to the IC card in the Hirokawa system operates on instruction data, rather than operating on a program to be stored on the card. (Brief at 9-14.)

We find that Hirokawa discloses three distinct embodiments of the invention. In the first (col. 2, l. 60 - col. 5, l. 21), IC card 1 (Fig. 1) includes data memory 4 (comprising a PROM). Data memory 4 (Fig. 3) is made up of system program area 4a, user program area 4b, and data area 4c. Col. 2, l. 60 - col. 3, l. 27. A user may add a user program into user program area 4b, provided that the same program is not contained in system area 4a. Col. 4, ll. 13-51. In Hirokawa's third embodiment (col. 7, l. 3 - col. 8, l. 21), a function program may be added to a program memory, comprising an EPROM or EEPROM.

Hirokawa's second embodiment (col. 5, l. 22 - col. 7, l. 2) is the most relevant to the aspect of the claimed invention that is in controversy. In particular, Hirokawa describes an encrypting/decrypting section 39 (Fig. 10), which encrypts data when data is transferred from CPU 11 (i.e., external programming CPU 11; Fig. 7) to another terminal device, and which is also for "decrypting encrypted data." Col. 5, ll. 25-49. Hirokawa further describes a process for storing start addresses of function programs in program memory 45 (e.g., a mask ROM) by writing different function codes into data

memory 43 (e.g., an EEPROM). Col. 5, l. 50 - col. 6, l. 5. As shown in Figures 14A and 14B, instruction data may be selectively linked to the different start addresses of the function programs in program memory 45. In this way, when function programs are updated or added, the decode program need not be updated; only the correspondence tables shown in Figures 14A and 14B are updated or added. Col. 6, l. 55 - col. 7, l. 7.

We agree with appellants that Hirokawa fails to disclose decrypting a program for storage on an IC card. When presented with the argument that Hirokawa discloses that encrypting/decrypting section 39 is strictly for decrypting “data,” the examiner points to column 6, lines 1 through 5 as support for the finding that the reference describes the “data” memory as storing both data and programs. (Answer at 6.)

Hirokawa at column 6, lines 1 through 5, however, refers to the correspondence tables of Figures 14A and 14B, which are stored in data memory 43. The programs themselves are not stored in data memory 43, but in program memory 45. Hirokawa’s second embodiment is directed to updating data memory 43, rather than the program memory in which the function programs reside.

Hirokawa, in the second embodiment, refers to transferring “instruction data” (e.g., col. 6, ll. 37-42). We acknowledge that a program may be considered as a form of “data,” at least in the context of the program being transferred for storage in card memory (e.g., col. 3, ll. 28-37). In particular, in Hirokawa’s first embodiment, a user may add one’s own program to the IC card, with the program that is to be stored being contained within a string of command text (Fig. 4). In Hirokawa’s second embodiment,

relevant to the “decrypting,” data memory 43 may be used for storing “various data” (col. 5, ll. 60-61). Further, the instruction data in that embodiment may contain a function code, or the function code and data (col. 6, ll. 21-25; Figs. 16A and 16B). However, Hirokawa does not disclose that the data transferred in the second embodiment is for storage on the IC card in the form of an executable program, much less decryption of a program for storage on the card.

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). We are persuaded by appellants that the examiner’s finding of anticipation is in error. The rejection appears to be based on picking and choosing elements described in separate embodiments of the reference, without presenting any evidence to show a rationale from the prior art for combining the features in such a way as to meet the terms of the invention that is claimed. “Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000).

In any event, we agree with appellants that Hirokawa appears not to contemplate decryption of data that is to be stored as an executable program on an IC card. The reference, instead, purports improvements related to decryption of “instruction data” transferred to the card. Col. 1, ll. 5-38. While the column 1 background section

suggests that one use for the disclosed “function programs” is decryption of data, the reference does not teach that the function programs, themselves, are decrypted before storage on the card in executable form.

We thus find neither disclosure nor suggestion, within the four corners of the Hirokawa reference, for appellants’ invention as claimed. Moreover, anticipation, rather than obviousness, is the basis for the rejection before us. We cannot sustain the rejection of claims 20-38, 51-58, 71-87, 93, and 94 under 35 U.S.C. § 102 as being anticipated by Hirokawa.

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CONCLUSION

The rejection of claim 20-38, 51-58, 71-87, 93, and 94 under 35 U.S.C. § 102 is reversed.

REVERSED

JERRY SMITH
Administrative Patent Judge

MICHAEL R. FLEMING
Administrative Patent Judge

HOWARD B. BLANKENSHIP
Administrative Patent Judge

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